

identifier will serve to associate all of the authorizing user's sensing devices with that social network identifier. Sensing devices may route collected data through the communication device in order to deliver the data, and data received by the central repository may be received in association with the communication device identifier. If the communication device identifier is associated with an authorizing user identifier—for example, by the central repository, data delivered to the central repository will be identifiable with the authorizing user identifier and, for example, access authorization information associated with the authorizing user identifier.

[0014] An authorizing user may specify individuals, groups, or categories that are to have access to data gathered by the authorizing user's devices. In one or more embodiments of the invention, information collected by devices may be stored in a central repository, and access to information stored in association with a particular identifier may be made accessible depending on social network relationships, or depending on specific settings associated with the devices gathering the information.

[0015] FIG. 1 illustrates a system 100 according to an embodiment of the present invention. The system comprises a plurality of sensing devices 102A-102E, all of which are capable of remote communication. Any number of different mechanisms may be used for remote communication with the sensing devices 102A-102E.

[0016] In one or more embodiments of the invention, the sensing devices 102A-102E may operate in at least two modes. One mode of operation is a setup or configuration mode, in which an identified user known to have required privileges, or having physical or proximate access to a sensing device, performs initial setup or configuration, or changes settings of or reconfigures the device. Such access can be achieved in a number of different ways.

[0017] For example, the sensing devices 102A-102D may act as a wireless network stations communicating with a remote communication access device. The remote communication access device may be, for example, a wireless network access point 104 providing access to a user local area network 106 which may in turn be connected to the public Internet 108. Such an approach allows for remote control of the sensing devices 102A-102D by a user having the needed privileges, who may communicate with the devices 102A-102D through a remote device 110 allowing access to the Internet 108 from another location. The remote device 110 may be any suitable device capable of communicating the needed information to the devices 102A-102D through a remote connection, and may be, for example, a personal computer, tablet computer, or personal communication device such as a cellular telephone or smartphone. Such devices may be, for example, configured to communicate through wireless networking or through a cellular network data connection. If the user can provide proper credentials for access to the local area network 106, such as administrator credentials, the user may be allowed to adjust settings for the devices 102A-102D. As an alternative, a local communication device, for example, a local computer 112, may communicate with the sensing devices 102A-102D through near field communication, and configuration using near field communication is discussed here in terms of configuration of the sensing device 102D. The local computer 112 may also operate as a wireless network station communicating with the access point 104, may provide a wired connection to the Internet 106, or both.

[0018] The local computer 112 is described here as serving as a configuring device for sensing devices such as the devices 102A-102D. Depending on specific configuration and operation, the device 102E may also be configured using the local computer 112, but it will be recognized that the device 102E may be expected to be configured through other mechanisms, such as its own on board interface.

[0019] The local computer 112 and the sensing device 102D may both be equipped with near field communication capability, such as through BLUETOOTH. Adjustment of settings for the sensing device 102D through such a mechanism may require that the device 102D be in proximity to the local computer 112. However, it will be recognized that the local computer 112 may be remotely controlled if appropriately configured, and it will also be recognized that numerous mechanisms for communication with the sensing device 102D may be used. For example, the sensing device 102D may be configured using a network connection through the access point 104, with the personal computer 112, or another configuring device communicating with the sensing device 102D through the network connection. In an embodiment of the invention, the sensing device 102E may operate as a user device, also known as a user equipment (UE) in a cellular communication network, gaining access to the Internet 108 through a base station 114, which may be implemented as an eNodeB (eNB). Depending on its particular configuration, the sensing device 102E may be controlled for purposes of initial setup and configuration or setup and configuration changes, through a near field communication with a device such as the local personal computer 112, through an Internet connection with the remote computer 110, or through another mechanism.

[0020] At initial setup, configuration is performed so that each of the sensing devices 102A-102E is collected data from each of the sensing devices will be associated with a particular authorizing user or set of users. For example, configuration may be performed in such a way that the data is associated with a user identifier for a data storage service or a social networking service. In the case of the devices 102A-102D, the communication device being used, such as the access point 104 or the computer 112, may be associated with the user identifier. Sensing device data delivered to, for example, a central repository, by the access point 104 or the computer 112 may therefore be recognized as being associated with the user identifier, and sensing devices associated with the access point 104 or the computer 112 will be known to be associated with the user ID because the data collected from the sensing devices will be known to be coming from the access point 104 or the computer 112. A UE such as the device 102E may typically be expected to have its own identifier and the UE's identifier. The device 102E may operate independently as a UE with its own identifier, and a network supporting the device 102E may associate the UE's identifier with a user.

[0021] The personal computer 112 may, for example, communicate with the devices 102A-102D through a local networking connection, and may provide access to the Internet 108 through a wired connection, through a wireless connection using the access point 104, or both. The remote device 110 or the local computer 112 may use a setup application 115 to perform initial setup of one or more of the sensing devices 102A-102D. The remote 110 or the local computer 112 may also be used to perform initial setup of the device 102E, or initial setup of the device 102E may be performed through other means, such as through an input interface available at